REMARKS

In accordance with the foregoing, claims 1 and 9 have been amended for clarification, new claims 10, 11, 12, and 13 have been added and, thus, claims 1-13 are pending and under consideration.

REJECTION UNDER 35 U.S.C. § 103 (a):

In the first Office Action, claims 1-9 were rejected under 35 U.S.C. § 103(a) in view of U.S. Patent No. 5,689,711 ("Bardasz") and U.S. Patent No. 5,272,642 ("Suzuki"). The rejection is traversed and reconsideration is requested.

Bardasz discusses a method and apparatus for converting a set of functions of any software system into a corresponding set of parametric functions and generates a resulting model as well as a dependency graphical representation of the model.

Suzuki discusses an apparatus that includes a layer table that tabulates attributes for the layer and other referencing information for other layers to establish correspondence of figure elements to maintain a hierarchical data structure.

The Office Action correctly states that Bardasz fails to explicitly suggest or teach, "attribute information" of the object as recited in independent claim 1. Accordingly, the Office Action relied upon Bardasz as providing such claimed feature by referring to the constraint relationships, which define the order or position of the object in the hierarchical structure. Fig. 5 of Bardasz discloses a user interface that calls a corresponding associative Application Programming Interface ("API") upon receipt of a command from a user. See column 9, lines 45-65. The constraint relationships the Examiner refers to relate to the length, width, height and center position of the object. However, the "attribute information" of the present invention relates to information about part names, authors, and creation dates in reference to a given object. See page 15, line 24 through page 16, line 1-2 in the specification of the present invention.

Further, Suzuki maintains a hierarchical data structure of a figure by acquiring and storing figure elements such as points, lines, circles, and curves in a layer table, which are then arranged upon an input from a user. For example, for the oblique conical frustum positioned on top of a rectangular block in Fig. 4, the hierarchy consists of a number of lines and ellipses

as illustrated in Fig. 5. The figure elements are then stored in the layer table. See column 5, line 4-12. The layer table includes:

> "... figure layers storing information on the figure elements of the input views, three-dimensional curve layers storing three-dimensional specification of three dimensional curves based on the figure elements, and three dimensional form layers storing three-dimensional specification of three-dimensional forms based on the three-dimensional curves, the three-dimensional forms defining the three-dimensional solid, ... and the three-dimensional form layers". See column 2, lines 15-31.

Accordingly, Suzuki discloses a hierarchy of layers constituting elements of a figure. The hierarchy of the present invention is at a much different level and provides very different relationships than the prior art.

According to the present invention, relationships of subordinate three-dimensional individual parts constituting the three-dimensional model are represented using a hierarchical structure as illustrated in Fig. 2 and emphasized in claims 1, 9, 12, and 13. Figure 2 illustrates PT1, PT2, PT3-1, and PT3-2, and PT4 to PT6 as part names constituting a three-dimensional model, which are arranged according to their hierarchy. The attribute information representing actual parts and dummy parts used for purposes of convenience of creating a three-dimensional model are represented and are stored in three-dimensional form as opposed to a layer table utilized in Suzuki. Moreover, dependent claim 4 of the present invention recites, "...said editing means rearranges attribute information of a part at a lower hierarchical level than a predetermined hierarchical level in the hierarchical structure of the three-dimensional model such that said part belongs to the predetermined hierarchical level." In contrast, in Suzuki, attribute information of an object is represented using a set of pieces of figure element data, such as points, lines, etc., and is placed in a layer table as viewed in Fig. 2 of Suzuki. Accordingly, Suzuki fails to teach or suggest all the claimed features of independent claim 1, 9, 12 and 13 of the present invention.

Moreover, the present invention comprises at least two separate storing locations. Specifically, actual data corresponding to individual parts is stored in one database, while attribute information including part names of individual parts, authors, creation dates, relationships of subordination with respect to other parts, as well as storage locations, etc. are stored in another database. See Fig. 4 of the present invention. Accordingly, as recited in newly added claims 10 and 11, the acquired attribute information and model of the individual parts are stored separately. Meaning, the sorting means sorts the part names stored in the

attribute information database in accordance with stored data indicative of hierarchical structure of the three-dimensional model. See page 11 of the specification of the present invention. In contrast, in Bardasz, when the associative API is called upon the request from the user interface, a combined string of data is passes to the processor. See column 9, lines 56-67.

The burden of establishing a prima facie case of obviousness based upon the prior art lies with the Examiner. In re Fritch, 23 U.S.P.Q. 2d 1780, 1783 (Fed. Cir. 1992). According to In re Fritch, the Examiner "... can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." Further, "rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention." In re Rouffet, 149 F.3d 1350, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). However, in the first Office Action, the Examiner provides no motivation to combine the cited references. Instead, the Examiner sets forth all the claimed features for finding the motivation for combining the same. For example, Bardasz does not teach that object information arranged in the hierarchical structure is "attribute information" of the object and it does not teach that such hierarchical structure can be used to define the position and/or order in the structure. However, the present invention does. Accordingly, Applicant respectfully asserts that the prima facie burden has not been met and the obviousness rejection fails on its face.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance, which action is earnestly solicited.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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